

10545 Armstrong Avenue

Mather, CA 95655

Tele: [916] 876-6000

Fax: [916] 876-6160

Website: www.srscsd.com

Board of Directors

Representing:

County of Sacramento

County of Yolo

City of Citrus Heights

City of Elk Grove

City of Folsom

City of Rancho Cordova

City of Sacramento

City of West Sacramento

Mary K. Snyder
District Engineer

Stan R. Dean
Plant Manager

Wendell H. Kido
District Manager

Marcia Maurer
Chief Financial Officer

April 24, 2008

Patrick Morris
Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

RE: Detailed Comments on Basin Plan Amendment to Control Methyl and Total Mercury in the Sacramento-San Joaquin Delta Estuary (Delta).

Dear Mr. Morris:

The District appreciates the opportunity to comment on the proposed "Basin Plan Amendment to Control Methyl and Total Mercury in the Sacramento-San Joaquin Delta Estuary (Delta)". Attached are our detailed comments on the Basin Plan Amendment and the Staff Report. These comments are provided in addition to comments submitted on April 9th, 2008. Please feel free to contact us if you have any questions.

Sincerely,



Mary Snyder
District Engineer

Attachment

RECEIVED
SACRAMENTO
CVRWQCB
03 APR 24 AM 9:53

Comments on Draft Basin Plan Amendment

Section: Delta Mercury Control Program (p.BPA-1)

p. BPA-1 to -2, First paragraph second sentence:

Actions are needed in the Delta and upstream tributaries to achieve the fish tissue objectives. The Delta Mercury Control Program includes mercury and methylmercury control requirements for the Delta and some upstream sources. Future upstream control programs are planned for tributaries to the Delta through which control actions will be implemented to meet load allocations for tributary inputs assigned by the Delta control program and to achieve the fish tissue objectives throughout the Delta...Attainment of the methylmercury allocations set forth in this control program is expected to result in achieving the fish tissue objectives.

The potential benefits of "controlling the controllable" are over-stated. Regulated sources of mercury such as municipal wastewater, stormwater and agriculture represent a small fraction of the overall mercury budget. A pie chart easily demonstrates the relative magnitudes of sources identified in the TMDL:

Annual Methyl Mercury Loads to the Delta

75% of MeHg loads are not addressed by this TMDL



The TMDL implementation plan primarily looks to control these minor sources and leaves the impression that these types of efforts will result in achieving the TMDL fish tissue target. In so doing, the TMDL implementation plan fails to articulate the reality that controlling this small percentage may have little or no impact on actually attaining the TMDL goals. The draft TMDL's only test for attainability (Staff Report p.18) is a comparison between fish mercury levels in the Delta watershed versus in other (generally lower) Western regional watersheds. Focusing any attention on these permitted sources, while approximately 60% of the sources are ignored, is misleading to decision makers and ultimately will be ineffective.

The TMDL should (1) describe what those plans are for the tributaries and what sources could be controlled in their watersheds, to guide Phase 1 of the TMDL and (2) initiate during Phase 1 a Use Attainability Analysis to determine if the fish tissue goals are reasonable and achievable and to adjust the fish tissue objective accordingly.

RECEIVED
SACRAMENTO
CVRWOCB
08 APR 24 AM 9:53

p. BPA-1 and -2, Phase 2 initiation

From (the effective date of this amendment) through (eight years after the effective date of this amendment), the 0.06 ng/l goal will not be used as an effluent limit for discharges with annual average methylmercury effluent concentrations greater than 0.06 ng/l. After (eight years after the effective date of this amendment) the Regional Water Board will reevaluate the 0.06 ng/l methylmercury goal and determine at that time which, if any, effluent limit adjustments are necessary.

The Regional Board needs to make and meet specific commitments before Phase 2 of the TMDL is initiated. The following questions remain for us:

- ⇒ Will this process be done as a component of Phase 2 of the TMDL or separately?
- ⇒ Will Phase 2, and particularly this piece about re-evaluating the goal, be subject to CEQA?
- ⇒ Which requirements will apply based strictly on this Basin Plan Amendment and which will apply subsequent to approval of the TMDL (that is, following State and federal review and approval)?

Specific commitments should include:

- Development of an overall strategy in Phase 1 for completing over 45 mercury TMDLs for multiple water bodies (based on the 2006 303(d) list for Region 5) and significant progress in completing them.
- Conduct of a Use Attainability Analysis in Phase 1 to determine if the fish tissue goals are reasonable and achievable. Adjustment of the fish tissue objective, accordingly.

Both of these commitments should include guidance and oversight by a technical advisory committee (TAC) comprised of technical and policy experts.

p. BPA-2, compliance schedules

When implementing the waste load allocations in this control program, the Regional Water Board may include schedules of compliance in NPDES permits that give permittees up to 2030 to comply with water quality-based effluent limits based on the waste load allocations. The compliance schedules in the permits must be as short as possible and must be consistent with the requirements of the Clean Water Act, EPA regulations at 40 CFR 122.476, and State law and regulations.

The underlined portion creates a false sense of security regarding future timelines. Dischargers need greater certainty that compliance will not be enforced from the beginning of Phase 2.

Section: Phase 1 Characterization and Control Studies (p.BPA-3)

p. BPA-3, collaborative opportunities

Dischargers may work individually or develop collaborative Characterization and Control Studies...

A more sustainable approach would be for all source categories to work collaboratively to prepare a regional Characterization and Control Study.

p. BPA-4, TAC formation and purpose

To clarify the commitment to the process of incorporating a TAC, the following edits should be made to the first paragraph:

Regional Water Board staff will ~~work to form a technical~~... By ~~[one year]~~ 6 months after the effective date of this amendment], staff will report to the Regional Water Board the ~~process~~ towards formation of the technical advisory committee list of committee members and a statement of their primary objective.

p. BPA-4, offsets use

The stricken text below reflects an attitude towards offsets of having to make up for a breach of the rules. Suggested edits are underlined:

The Regional Water Board will consider: modification of methylmercury goals, objectives, or allocations; adoption of management practices and implementation schedule for methylmercury controls; and adoption of a Mercury Offset Program ~~to compensate for loads in excess of the methylmercury allocations.~~ and adoption of a Mercury Offset Program as an equivalent option for compliance with mercury and methylmercury allocations

p. BPA-5, participation by upstream dischargers

The lack of certainty conveyed by the stricken text below is a disincentive to any upstream party's participation. Suggested change is underlined.

If such dischargers (upstream dischargers not required to participate in this TMDL) actively participate in the studies, they ~~may~~ will be exempt from conducting their own individual studies as part of any future upstream mercury control programs.

Section: NPDES Wastewater Treatment Facilities (p.BPA-6)

p. BPA-6, monitoring requirements

The Regional Board already required monitoring data from all Central Valley wastewater facilities, under a 13267 letter in 2003. Those data have been used in many ways since then, particularly for the ongoing comparison in treatment plant performance and in this TMDL to set interim concentration limits and final wasteload allocations. The Regional Board should seriously consider the value in asking the designated facilities to initiate (or to continue) costly effluent and receiving water methylmercury monitoring.

The underlined text should be added:

The Regional Water Board may require facilities not listed in Table C to monitor methylmercury and total mercury based on facility- and receiving water-specific conditions. After one year of monitoring, facilities may modify their monitoring frequency with approval of the Executive Officer.

p. BPA-6, effluent concentration limits

Non-attainment of the proposed interim effluent limits would result in permit violations and associated penalties, but would not produce change in wastewater treatment in the near term. Given the minor magnitude of POTWs as mercury sources to the Delta, there would be minimal additional value to water quality or to society in setting effluent limits for these dischargers.

Section: Cache Creek Settling Basin

It is unclear how the TMDL can require managers of the Cache Creek Settling Basin to reduce mercury loads discharged from the basin. This requirement falls into the category of "no good deed goes unpunished". The constructors and managers of the basin are not responsible for the mercury that passes through the basin. Rather, by building the basin they have effectively removed approximately half of the

inflowing mercury. This requirement would effectively stop any implementing entity from constructing a settling basin anywhere in the Central Valley for fear of later having to improve it beyond its intended design for reasons beyond their control.

Section: Pilot Mercury Offset Projects and Early Implementation of Total Mercury Reduction Efforts (p.BPA-13)

We support the concept of offset programs as an alternative and equivalent regulatory compliance tool. We support the preliminary efforts made to begin consideration of an offset program; however, we would like to see more effort put into the program from the beginning of TMDL implementation. These comments are intended to encourage and help develop a feasible program, consistent with the studies submitted to the Regional Board in 2005 by SRCSD and in 2006 by the City of Stockton. For context, here are the motivations for the Regional Board to provide more positive guidance in this TMDL:

- Permits given to SRCSD and the City of Stockton required offset feasibility studies. Regional Board staff participated in SRCSD's study.
- The San Francisco Regional Water Board expressed interest in seeing how mercury offsets work in the Central Valley.
- Regional Board members expressed interest in developing an offset program during development of the Cache Creek mercury TMDL.
- SRCSD submitted its offset feasibility study in March 2005 but received no response.
- The Cache Creek TMDL, with vague language suggesting the possibility of offsets, has been approved by the Regional and State Boards.

Over-arching comments are that:

- At this time, we see a fixed compliance date for wasteload allocations yet no feasible means to comply. An offset program appears to be the only reasonable option available, yet this TMDL leaves it to others to develop. In stalling the implementation of an offset program that will inevitably be necessary for dischargers to meet WLAs, the Regional Board is delaying the compliance process.
- Every constraint and complicating factor applied to offsets will reduce the feasibility of the entire program. Constraints to note include separating total and methyl mercury allocation dates and offset programs, and delineating the TMDL boundary around the Delta excluding upstream areas and many Sierra Nevada foothill reservoirs that currently have fish consumption advisories.
- No responsible discharger is going to implement a total mercury offset project, to get only total mercury credits knowing that the Regional Board could come back with separate, additional methylmercury allocations or permit concentration limit that could potentially result in hundreds of millions of dollars in plant technology improvement. Mercury concentration limits will require end-of-pipe compliance and the focus will be on paying for additional treatment. Mercury regulation based on mass, and offset projects that provide both total and methylmercury credit, would provide the most potential of early improvements in fish tissue.
- Any offset program should not attempt to unfairly leverage POTWs beyond their proportional contribution to the mercury problem. The State Water Board has stated that such unfair leveraging shall not occur in its resolution remanding the San Francisco Bay mercury TMDL.
- Offset projects in tributary watersheds will be stalled by the concern that future TMDLs will allocate or otherwise mandate reductions by any identified offset projects.

p. BPA-13, evaluation criterion #5

The text beyond the initial “preference” statement should be deleted. Reasons to consider this change include:

- Pilot projects in adjacent watersheds (assumed to mean watersheds for the TMDL’s subareas) are unlikely to show significant Delta-wide benefits, unless you consider the knowledge gained a Delta-wide benefit.
- Adjusting load and wasteload allocations for all sources within the discharger’s watershed to account for environmental impacts at the discharger’s point of discharge is assuming a localized impact. SRCSD’s bioaccumulation study found that not to be a valid assumption.
- How would allocations be adjusted? EPA guidance says that “Upon revision of the loading capacity, wasteload, or load allocations [in Phase 2], the TMDL would require re-approval by EPA.” This revision process will prove onerous, create discord among potential watershed partners, and hinder the ability of any market-based incentives to act quickly.

p. BPA-14, evaluation criterion #6

It sounds overly ambitious and incongruous to request that pilot offset projects be implemented quickly yet provide long-term results or substantial short-term improvements. If we already knew how to prove long-term results, we would not need to pilot test offset projects. Fundamental principles of pilot offset project should be provided in this BPA including consideration of the exploratory and fact-finding nature of the effort.

p. BPA-14, offset pilot project requirements

Overall these requirements indicate a profound misunderstanding of the purpose of market-based incentives such as offsets. The purpose of offsets is to encourage innovation and early action, and to save society money. Comments are provided using the same numbering system as the requirements.

The following edits would reduce a disincentive of timely credit use:

1. Dischargers that implement approved pilot total mercury and methylmercury offset projects to accumulate credits may use the credits ~~to extend time schedules for compliance with methylmercury wasteload allocations by up to five years, but shall not use the credits to extend schedules beyond 2035 for as long as credits last.~~

The basis for approving offsets should be strictly related to environmental benefits. There is no inherent value in doing on-site controls – even if feasible – versus reducing a greater load from an otherwise uncontrolled source. Delete requirement 2:

*2. Any discharger proposing a pilot offset project shall conduct the **Characterization and Control Studies** to determine the feasibility of on-site controls for its own methylmercury discharges.*

The TMDL already states that the Board will not consider implementing a program for eight years. There’s no value in closing the window of opportunity before then. Delete requirement 3.:

3. Pilot offset proposals must be submitted to the Regional Water Board by [4 years after the effective date of this amendment].

A safety factor would be a component of an offset ratio. The following edit should be made:

4. Pilot offset proposals shall evaluate mercury/methylmercury transformations in the environment at the location of the offset project, and shall include an appropriate offset ratio ~~and safety factor~~ to account for the location and uncertainties of the benefits of the offset project versus the environmental impact of the effluent discharge.

The formal State Water Board's scientific peer review process would be cumbersome and time consuming, not commensurate with the pilot nature of any projects that would be proposed. The following requirement should be deleted or replaced with something more practical such as approval by the Executive Officer:

5. Any proposed project shall be subject to scientific peer review under the State Water Board's external scientific peer review process developed to comply with Health and Safety Code section 57004. Following peer review, staff shall circulate the proposal for public review and comment and then shall present the proposal for consideration for approval by resolution of the Regional Water Board.

The requirement on p. BPA-14, last paragraph, is inconsistent with evaluation criterion #6. The edits provides would help along with deleting the last paragraph on p. BPA-14:

6. The period for offset credit accumulation shall not exceed 10 years following Regional Water Board approval of the pilot offset project unless the pilot is extended and approved as a full offset project. ~~At any time, the Regional Water Board may review the project and consider a time extension.~~

Offsets are a type of trade. The scenarios that requirement #8 would prohibit include a conservation organization who generates credits and then wants to recoup expenses, or sponsors who run short of funds before project completion and seeks partners to cost share. Requirement #8 should be deleted.

p. BPA-14, last paragraph

The five-year requirement and 2035 end dates are unnecessary and reduce the feasibility of offsets as a compliance tool, contrary to the intent of criterion #6 discussed above. The entire paragraph should be deleted.

p. BPA-15, items 1 and 4 under credit for SRCSD mercury reduction activities:

Item 4 is inconsistent with item 1 which acknowledges the mass limitation in our current permit and the credit accumulated for total mercury, grants credit for methylmercury reductions, and makes those credits available to the extent that credit has accumulated. It is unclear if accrued credits that have accumulated under Order No. 5-00-188 cease after [the effective date of this amendment].

p. BPA-15, Risk Management Program

Assigning responsibility to minor sources to develop risk management plans implies that those sources are primarily responsible for the impairment. As the majority of mercury in our watershed is from legacy sources, not the minor sources, the State of California should share in funding, development and implementation of risk management plans. As was learned from the Calfed Fish Mercury Program, any education and outreach activity should be coordinated through local community groups and state and county Departments of Health Services and Education.

Section: Recommendations for Other Agencies (p.BPA-16)

The implementation plan needs to consider more fully the effects of non-action by others. The implementation plan requirements that the Regional Board imposes on itself and on entities over which the Regional Board has no authority are significant. Non-compliance with the schedule of activities by the Regional Board will create compliance issues and regulatory uncertainty for all.

The Regional Board must recognize that mercury in the Delta is but one pollutant in one water body among dozens of others. The 2006 303(d) list includes over 100 water bodies in the Central Valley region

impaired by over 150 pollutants. Mercury is included as a pollutant in 38 of those water bodies. The two major TMDLs underway, Cache Creek and the Delta, both incorporate a phased approach requiring follow-up over the next decade. Just to start, this TMDL must be approved by the State Board and EPA, while the Regional Board must provide guidance for special study work plans and then approve work plans. Pending the completion of the required special studies, the Regional Board must digest the multiple study reports along with Calfed and others' science reports to develop phase 2 of the TMDL. In the event that Regional Board does not meet its obligations, the default for NPDES permits, which are renewed ostensibly every five years, may be to implement the TMDL goals as effluent limits.

Many actions in the TMDL implementation plan are suggestions, recognized as being beyond the jurisdiction of the Regional Board. Yet these actions are pre-requisites for many subsequent requirements. For example, p. BPA-17, middle states [emphasis added]: "The State Water Board should **consider...**" Without the results of these hoped-for studies, critical information for developing the Phase 2 implementation plan will be missing. Regional Board staff must:

- Develop an overall strategy for completing TMDLs in the Central Valley that addresses monitoring and special studies, use of the phased approach, and opportunities for addressing multiple pollutants or water bodies concurrently.
- Recognize the contingencies associated with conditions imposed on permittees and be more explicit in what would trigger the end of Phase 1.

Section: Tables B & C (p.BPA-34)

SRCSO Walnut Grove WWTP and West Sacramento WWTP are listed as permitted facilities. Walnut Grove will be discharging to the SRCSO system in the near future and the City of West Sacramento began discharging to SRCSO in November 2007. In addition, the California State Central Heating and Cooling facility is listed. There is a proposal by the State to cease discharging into the Sacramento River and redirect any new wastewater associated with this activity to SRCSO (cooling system blow-down). Table C (p. 35) lists Procter & Gamble Co. WWTP as a discharging facility. We believe they have directed that flow to the SRCSO system (cooling tower blow-down). Please explain any impact these issues have on overall allocations for SRCSO.

The percent reduction requirements used to calculate the allocations in the BPA do not agree with the percent reduction requirements presented on p. xx in the Staff Report. This makes it impossible to know which numbers staff wishes to use. Because the BPA tables carry allocations that will be enforced on sources and permittees, it is important that we have confidence that the BPA is, in fact, populated with numbers supported by the work presented in the staff report. Consistency will help clarify the mathematics. A comparison table is provided here:

Comparison of MeHg Loads (g/yr) numbers given by the BPA, BPA Staff Report, and TMDL Staff Report

Source	2008 BPA		2008 BPA Staff Rpt		2008 TMDL Staff Rpt	
	Load (g/yr)	Percentage	Load (g/yr)	Percentage	Load (g/yr)	Percentage
Agriculture	122.9	?	122.8	2.4%	122.9	2.4%
Wetlands	987.3	?	983.3	18.8%	987.3	18.9%
Open Water	852.2	?	860.2	16.5%	852.2	16.3%
Tributaries	2989.5	?	3003.9	57.6%	3011.5	57.7%
Mun/Ind Wastewater	—	?	205.7	3.9%	203.2	3.9%
MS4s	18.9	?	19.8	0.4%	18.9	0.4%
Atmospheric Deposition	—	?	22.7	0.4%	22.7	0.4%
Urban runoff (nonpoint source)	—	?	—	—	0.8	0.0%
Sum	?	?	5218.4	100%	5219.6	100%

Comments on Staff Reports

1. Implementation Date

p.1 "Implementation will begin after the Basin Plan amendments are legally applicable."

Please clarify that this also refers to the "effective date" that the Basin Plan amendment refers to and describe the process that leads to the "effective date".

2. Delta Fisheries Importance

p.21, last paragraph

The conversation of consumption rates has tended to focus on the highest consumers. The assumption here is that 10% of mothers in the Delta are eating so much locally-caught fish that their children would be impaired. Is this a reasonable assumption?

3. Implementation Plan and Schedule

p.25, first paragraph

If the tributaries are assigned load allocations, then they also are required to meet their allocations in 2030. Given that TMDLs have not progressed for those ~40 watersheds, this effect should be reconsidered.

4. Use of Goal as Limit

p.31-32 text and table 4.1 calculation of load reductions using 0.06 ng/L

The percent reductions in load are calculated from the ambient water column goal of 0.06 ng/L. In this regard, the goal is used as a limit by driving reductions to it. This formulation is inconsistent with the Basin Plan amendment statements about not using the goal as an effluent limit.

5. Use of unpublished draft staff report

Multiple references to Bosworth et al., 2008, which is an unpublished, draft staff report.

Investigation of WWTP effluents should be done in collaboration with the WWTP community. There are likely erroneous assumptions and thus unsupported conclusions given in the staff report as a result of those assumptions. Any such speculations (for example, the bullet points on p.35) should be done in collaboration with CVCWA and presented, if at all, as hypotheses.

6. Cache Creek Settling Basin requirements

p.71-73 presents detailed records of maintenance plans and options for increasing sediment / total mercury removal. The maintenance plan that the TMDL seems to rely on is being evaluated holistically.

Requiring "compliance" with that plan and full implementation of sediment trapping options considered by CDM (2004) compromises on-going flood control evaluations currently being developed by Yolo County and Sacramento Area Flood Control Agency (SAFCA). Furthermore, the action of requiring more from a beneficial structure removes the offset opportunity that SRCSD has been seeking.

7. Offset Constraints

p.78 first bullet

Projects such as at the Cache Creek Settling Basin may provide sufficient offset credit even though they would not have measurable load reductions distinguishable beyond the noise in the inflow-outflow data.

Requiring documentation of load reductions needs to be broadened.

p.79: "For example, if a project proponent discharges to the San Joaquin subarea of the Delta, but implements a pilot project in the Cache Creek watershed, which discharges to the Yolo Bypass subarea, the pilot project would result in no improvement for the San Joaquin subarea."

Restrictions such as this would have no beneficial effect on the environment. Recognizing that all permitted dischargers represent such a small fraction of the mercury load to the Delta, intra-subarea trading should not be inhibited by such restrictions.

Delete this example.

8. SRCSD References

p. 93, reference to "SRCSD Sacramento River WWTP" and "SRWWTP"

For consistency, references to SRCSD's main plant should be "SRCSD Sacramento Regional Wastewater Treatment Plant" or "SRWTP".

9. Attainment of Objectives

p.111 "Proposed fish tissue objectives are expected to be achieved under Alternatives 2 and 3."

pp.19-20: "Targeting methylmercury sources in addition to total mercury sources – by reducing methylmercury discharges or curtailing the methylation process – is expected to more rapidly reduce methylmercury concentrations in fish and enable full compliance with Alternatives 3 and 4."

Such statements are severely misleading to decision makers, implying that reducing small MeHg discharges will result in fish tissue attainment. A reasonable assessment of the TMDL is that it will have no beneficial impact on the Delta, given that it only addresses a small portion of the total mercury and methylmercury loads to the Delta and no one know how to achieve those reductions.

"Curtailing the methylation process" in 93% of the MeHg inputs to the Delta would be necessary to achieve at least 55% reduction in fish mercury levels (average reduction needed to meet criterion for TL3/TL4 fish). Even if ALL of the remaining 7% of the MeHg in wastewater, urban and agricultural runoff is demethylated (see first comment on Appendix A), methylation will still need to be "curtailed" in wetlands to get to ~25% MeHg reduction, still leaving ~75% of the MeHg in the environment not addressed under this TMDL. The approach outlined in this TMDL does not add up to attainment of desired fish tissue levels.

Since the success of this TMDL will rely on "curtailing the methylation process", the adverse effects of this proposed action on the environment must be studied and estimated BEFORE taking any action. Pilot study is needed.

10. Redesigning Treatment Plants to Minimize Methylmercury Concentrations

p.113: "These patterns indicate that it will likely be feasible to control methylmercury from some sources through design, management, and control options."

The only "control options" to consider are design and management, so "control options" seems redundant in this sentence. Contemplating that treatment plants could and possibly should be redesigned merely to potentially reduce methylmercury loads is what SRCSD and other POTWs fear in future permits. These high cost attempts at mercury reductions are not wise use of public resources as they would provide little to no measurable improvement in fish.

11. Walnut Grove facility

Walnut Grove is scheduled to be decommissioned this year. A pipeline is being constructed to bring flows to SRWTP. We are not allowed to discharge past May 15, 2008. Courtland will also be shut down this year.

All requirements for the Walnut Grove facility should be removed. Any wasteload allocations given to that facility should be added to the SRWTP's totals.

12. Revise the ambient monitoring to consider biosentinel fish

The Calfed Fish Mercury Project's biosentinel work from 2005-07, tells a somewhat different story than the draft TMDL regarding how mercury becomes bioavailable in the environment and biomagnifies in larger fish. This work suggests that biosentinel (native small) fish monitoring should be an alternative option in a RMP approach for ambient water mercury monitoring, as it more directly identifies actual mercury uptake into the food web and, over multiple years of comparable date, can be used to identify important watershed sources of mercury – targets for future offset projects.

Appendix A. TMDL Staff Report

p.iv, p.63+: The linkage analysis only addresses the linkage between concentrations in water and fish, whereas the implementation plan addresses the linkage between methylmercury sources and concentrations in water.

The implementation plan presumes that methylmercury source controls will directly reduce mercury levels in fish in the Delta. The resulting methylmercury wasteload and load allocations based on this incomplete linkage analysis misrepresent our ability to control mercury levels in fish.

The TMDL should recognize that, in the ambient environment, there is a dynamic equilibrium between total and methyl mercury such that reducing methyl mercury concentrations (i.e., demethylating methylmercury without changing total mercury concentrations) in discharges may have no impact on methyl mercury concentrations in the Delta.

Include a Phase 1 study to: 1) determine why the central Delta aqueous methylmercury concentrations are so low, and 2) model equilibrium chemistry in the tributaries to determine if removing small sources of methyl mercury will impact in-stream methylmercury concentrations.

1. The TMDL linkage analysis needs to estimate a realistic goal for background levels in fish.

The TMDL does not indicate a background, attainable level of methylmercury in water or in fish. A responsible assessment of attainability of this TMDL depends on a clear sense of the magnitude of change to achieve a potential target. Background concentrations of total mercury and methylmercury are not given, obscuring the uncontrollable nature of some major sources and local conditions.

The lowest levels found in the central Delta are not the same as background levels elsewhere. Other factors such as salinity, temperature and ecology influence the relationship between mercury in water and in fish.

The current plan risks spending billions of dollars with no evidence to predict success or even of measurable improvement. Requiring blanket reductions in all measurable sources is, while comprehensive, not a wise use of public funds. This approach fails to take into account the relative cost of mercury controls at various sources. In this failure, the TMDL does not yet consider the reasonableness of its blanket proposal.

Before implementing wasteload and load allocations in Phase 2, commit to expanding the linkage analysis to estimate background levels of mercury and to quantify the linkages between mercury sources and methyl mercury concentrations in water.

2. SRCSD's SRWTP loads

p. 90-91 tabulated loads for POTWs, including SRWTP

The Table and note (h) indicate that SRWTP collected concentration data from 2000 to 2003. In fact, SRWTP has a monthly record beginning in 2000 and continuing to date. Was the abbreviated period's data used for comparability / consistency in the table?

Appendix C. Background

1. References

None of the appendices include the references used in the text.

Each appendix may need its own reference section.

2. Requirements for Sacramento Combined WWTP

p. C-16: Tabulates monitoring requirements for this unique WWTP

This facility operates during wet weather events only. Quarterly sampling is ambiguous because half the year there is not even the potential for discharge. Furthermore, requiring receiving water monitoring associated with this facility would be extremely problematic. Discharges occur during wet weather, when available workers are generally occupied with addressing storm-related events.

Reconsider requiring any additional monitoring for this WWTP.

3. Overall Cost Assumptions

p. C-17 costs

The tabulated costs are expressly for additional costs. This format does not recognize all that dischargers are already spending on mercury-related issues, diverting limited resources from other activities. For example, SRCSD's in-plant methylmercury mass balance study cost approximately \$160,000, which is more than double the estimate given on p.C-14.

CalFed's mercury strategy states that "The goal of the mercury strategy is to provide a unifying framework for the integrated investigations needed to build a scientific foundation for ecosystem restoration, environmental planning, and the assessment and eventual reduction of mercury-related risks in the Bay-Delta ecosystem... Each core component addresses one or more management goals and includes specific, supporting objectives pertaining to scientific activities (research and monitoring), management actions, or both. Management actions include source remediation, risk communication, ecosystem restoration, and landscape management." To date, approximately \$30 million has been spent in this effort, yet no one would say that the goals have been met. That budget level is a reasonable expectation of the funding needed to really address this TMDL's Phase 1 characterization and control study requirements.

This section should recognize that (1) SRCSD has spent approximately \$4 million on mercury-related efforts required by our current NPDES permit and to prove viability of offsets and (2) Calfed has spent over \$30 million and still has not provided answers to basic scientific questions that managers need.

The cost estimate range should consider the possibility that dischargers may, for a variety of potential reasons, not be able to conduct collaborative studies. Costs for SRCSD and other POTWs could end up in this range over the Phase 1 implementation period. In that the goal of the CalFed mercury strategy is similar to that of this TMDL, the high estimate of costs that this TMDL would cause POTWs and other dischargers in the Delta region to incur could be more like \$30 million over the Phase 1 period, with no guarantee that further research into controls will yield meaningful management options that attain the desired levels in fish. Use attainability must be addressed to know if fish goals are appropriate or if risk management is needed in perpetuity.

C-17: Effect of concentration limits "The proposed facility-specific methyl mercury concentration limits for existing facilities are based on data derived from conditions that represent normal operational conditions. The limits would not require the facilities to implement any new processes as long as the facilities maintain the efficiency of existing treatment processes and pretreatment programs."

This text does not address (1) the 0.06 ng/L "goal" that would eventually be interpreted as an effluent limit nor (2) the final wasteload allocation which could require caps that could only be met with concentration reductions. Both cases contradict the presumption that no new treatment process would be needed. For a plant our size to go to advanced treatment, it could cost our community anywhere from \$1.3 billion dollars for microfiltration and UV to over \$3 billion dollars if we were to go to reverse osmosis – which could potentially double or triple our rates.

C-22 to C-23: Cost and treatability estimates

The cost estimates used to arrive at expected increases in operations costs associated with complying with the TMDL are based on a number of highly uncertain assumptions about effluent concentrations associated with various treatment processes. These assumptions are based on an internal, draft staff report. SRCSD and other CVCWA members anticipate working collaboratively with the Regional Board to continue evaluating the apparent relationships between treatment trains and effluent methylmercury concentrations.

At this time the treatability and associated cost estimates should be severely qualified or removed altogether.

p.C-69 through C-70: Expectation for risk reduction

The text seems to imply that dischargers who are required to implement risk reduction efforts would cover the Delta region itself. SRCSD, if indeed required to take on the state's responsibility for risk reduction, would likely restrict its geographic focus to its service area and the reach of the Sacramento River just downstream of the SRWTP outfall. The costs associated with many such individual efforts could be higher than assumed yet would not provide the broad spatial coverage anticipated. Further, as the mercury legacy is a statewide problem and fish levels are not anticipated, under any control options, to be achieved anytime soon – decades to centuries. The need for risk reduction is statewide, and although fish advisories will vary with location, the State responsibility for participation in this risk reduction effort should be proportional to the contribution the waters of the state make to the impairment (75% MeHg – 98% THg).

Qualify the costs and increase the potential costs if all minor permitted dischargers were required to develop their own programs.